

CLAIMS:

1. A mounting fixture for use with a vehicle wheel alignment system having at least one vehicle wheel alignment sensor, said fixture comprising:

an elongated body having a first bore adapted for removable attachment to the
5 wheel hub assembly on a vehicle wheel hub and a second bore adapted to receive a vehicle wheel alignment sensor; and

a locking mechanism configured to secure said vehicle wheel alignment sensor in said second portion of said bore.

2. The fixture of Claim 1 wherein said first portion of said first bore is
10 threaded for attachment to said wheel hub assembly.

3. A method for measuring a vehicle wheel alignment angle from a vehicle wheel hub assembly, comprising:

mounting a wheel alignment sensor to a wheel rim and tire assembly secured to said vehicle wheel hub assembly;

15 obtaining a first measurement of at least one alignment angle with said mounted wheel alignment sensor;

removing said wheel alignment sensor from said wheel rim and tire assembly;

removing said wheel rim and tire assembly from said vehicle wheel hub assembly;

20 mounting said wheel alignment sensor to said vehicle wheel hub assembly; and

obtaining a second measurement of said at least one alignment angle with said mounted wheel alignment sensor.

4. The method of Claim 3 wherein the step of removably securing an adapter to said wheel hub assembly includes the step of securing at least a pair of supporting arms to said wheel hub assembly, said supporting arms holding a wheel alignment sensor mount in a fixed relationship to said wheel hub assembly.

5 5. The method of Claim 3 wherein the step of removably securing an adapter to said wheel hub assembly includes the step of clamping said adapter fixture to a surface of said wheel hub assembly.

6. The method of Claim 3 for measuring a vehicle wheel alignment angle from a vehicle wheel hub assembly wherein the step of mounting said wheel alignment
10 sensor to said vehicle wheel hub assembly includes the steps of:

removably securing an adapter to said vehicle wheel hub assembly after removing said wheel rim and tire assembly from said vehicle wheel hub assembly; and mounting said wheel alignment sensor to said adapter.

7. The method of Claim 3 for measuring a vehicle wheel alignment angle
15 from a vehicle wheel hub assembly further including the step of utilizing said first measurement and said second measurement to calculate a change between said first and second measurements.

8. The method of Claim 7 for measuring a vehicle wheel alignment angle from a vehicle wheel hub assembly further including the step of:

20 adding said calculated change to at least one current angle measurement of said at least one alignment angle with said wheel alignment sensor mounted to said wheel hub assembly to offset said current angle measurement.

9. The method of Claim 8 for measuring a vehicle wheel alignment angle from a vehicle wheel hub assembly further including the step of displaying said offset current alignment measurement on a display.

10. The method of Claim 7 for measuring a vehicle wheel alignment angle
5 from a vehicle wheel hub assembly further including the step of:

adding said calculated change to at least one specification value of said at least one alignment angle with said wheel alignment sensor mounted to said wheel hub assembly to offset said specification value.

11. A method for adjusting an alignment angle of a vehicle wheel consisting of
10 a wheel rim and tire assembly secured to a wheel hub assembly, comprising:

mounting a wheel alignment sensor to said wheel rim and tire assembly;

obtaining a first measurement of at least one alignment angle with said mounted wheel alignment sensor;

storing said first measured at least one alignment angle;

15 removing said wheel alignment sensor from said wheel rim and tire assembly;

removing said wheel rim and tire assembly from said wheel hub assembly;

removably securing an adapter to said wheel hub assembly;

mounting said wheel alignment sensor to said adapter; and

obtaining a second measurement of said at least one alignment angle with said
20 mounted wheel alignment sensor.

12. The method of Claim 11 for adjusting an alignment angle of a vehicle wheel further including the steps of utilizing said recorded first measurement and said

second measurement, together with at least one subsequent measurements to provide an updated alignment angle display; and

adjusting said at least one alignment angle while observing changes in said continuously updated alignment angle display.

5 13. The method of Claim 12 for adjusting an alignment angle of a vehicle wheel wherein said step of adjusting said at least one alignment angle includes the installation of at least one alignment angle adjustment component.

 14. A mounting fixture for use with a vehicle wheel alignment system having at least one vehicle wheel alignment sensor, said fixture comprising:

10 a body adapted for removable attachment to a wheel hub assembly on a vehicle wheel hub and a receiver adapted to receive a vehicle wheel alignment sensor.

 15. The mounting fixture of Claim 14 wherein said receiver is configured to receive a mounting shaft from said vehicle wheel alignment sensor.

 16. The mounting fixture of Claim 14 wherein said receiver is configured to
15 engage said vehicle wheel alignment sensor.

 17. A mounting fixture for use with a vehicle wheel alignment system having at least one vehicle wheel alignment sensor configured to measure wheel alignment angles at a vehicle wheel hub assembly, said fixture comprising:

 a central wheel alignment sensor mount configured to receive said wheel
20 alignment sensor; and

 one or more arms attached to said sensor mount, each of said arms configured for removable attachment to a surface of said vehicle wheel hub assembly.

18. The mounting fixture of Claim 17 wherein each arm is configured for magnetic attachment to said surface of said vehicle wheel hub assembly.

19. The mounting fixture of Claim 17 wherein each arm is configured for suction attachment to said surface of said vehicle wheel hub assembly.

5 20. The mounting fixture of Claim 17 wherein each of said arms is equidistantly disposed about an outer surface of said central wheel alignment sensor mount.

21. The mounting fixture of Claim 17 further including:

10 a central support attached to said sensor mount, said central support configured to brace said sensor mount against a second surface of said wheel hub assembly; and wherein each of said arms is configured to engage said surface of said wheel hub assembly to bias said brace against said second surface.

22. A mounting fixture for use with a vehicle wheel alignment system having at least one vehicle wheel alignment sensor configured to measure wheel alignment
15 angles at a vehicle wheel hub assembly, said fixture comprising:

a central wheel alignment sensor mount configured to receive said wheel alignment sensor;

a clamp configured for removable attachment to said vehicle wheel hub assembly, said clamp including a semi-circular strap element having first and second
20 ends defining an inner diameter, and an adjustable latch fitted between said first and second ends, said latch configured to expand and contract said inner diameter defined by said semi-circular strap element; and

at least two support arms, each support arm attached to said sensor mount at a first end and to said semi-circular strap in a sliding connection at a second end, whereby said sensor mount is supported apart from, and coaxial with, said clamp.